

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: **Taylor R. Efland**

Docket No.: **TI-30963.1**

Serial No.: **TBD**

Examiner: **TBD**

Filed: **Herewith**

Art Unit.: **TBD**

For: **Thermally Enhanced Semiconductor Chip Having  
Integrated Bonds Over Active Circuits**

Conf. No.: **TBD**

**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner For Patents  
Alexandria, VA 22313-1450

**MAILING CERTIFICATE UNDER 37 C.F.R. § 1.8(A)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Alexandria, VA 22313-1450.

  
Elizabeth Austin

 **6/25/2003**  
Date

Dear Sir:

Applicant wishes to bring to the attention of the Patent and Trademark Office the information noted on the enclosed PTO-1449. Copies of the listed references are enclosed.

This information disclosure statement is being mailed before receipt of a first office action on the merits in accordance with 37 C.F.R. 1.56, 1.97, and 1.98.

No fees are due. However, should the Office decide otherwise, please charge the necessary fee to the deposit account of Texas Instruments Incorporated, Account Number 20-0668.

Texas Instruments Incorporated  
P. O. Box 655474, MS 3999  
Dallas, Texas 75265  
(972) 917-5653

Respectfully submitted,



Michael K. Skrehot

Attorney for Applicants

Reg. No. 36,682

Please type a plus sign (+) inside this box ^

Approved for use through 10/31/2002. OMB 0651-0031  
Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE

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Substitute for Form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete If Known</b>	
				Application Number.	TBD
				Filing Date	Herewith
				First Named Inventor	Taylor R. Efland
				Group Art Unit	TBD
Examiner Name	TBD				
Attorney Docket No.	TI-30963.1				

Sheet	1	of	2
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## U.S. PATENT DOCUMENTS

Exam. Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	4,259,685		Romano	03/31/1981	
	AB	4,518,982		DuBois, et al.	05/21/1985	
	AC	5,610,442		Schneider, et al.	03/11/1997	
	AD	5,753,974		Masukawa	05/19/1998	
	AE	6,075,289		Distefano	06/13/2000	
	AF	4,346,396		Carroll, II, et al.	08/24/1982	
	AG					
	AH					
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	AJ					
	AK					
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	AN					
	AO					

## FOREIGN PATENT DOCUMENTS

Exam. Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	BA							
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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			Application Number	TBD	
			Filing Date	Herewith	
			First Named Inventor	Taylor R. Efland	
			Group Art Unit	TBD	
			Examiner Name	TBD	
Sheet	2		2	Attorney Docket No.	TI-30963.1

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Exam. Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA	"Controlled Collapse Reflow Chip Joining", L. F. Miller, IBM J. Res. Develop., Vol. 13, May 1969, pp. 239-250	
	CB	"Geometric Optimization of Controlled Collapse Interconnections", L.S. Goldman, IBM J. Res. Develop., Vol. 13, May 1969, pp. 251-265	
	CC	"Paramedic Study of Temperature Profiles in Chips Joined by Controlled Collapse Techniques", Sevgin Oktay, IBM J. Res. Develop., Vol. 13, May 1969, pp. 272-285	
	CD	"Reliability of Controlled Collapse Interconnections", K.C. Norris and A.H. Landzberg, IBM J. Res. Develop., Vol. 13, May 1969, pp. 266-271	
	CE	"SLT Device Metallurgy and Its Monolithic Extension", P.A. Totta and R.P. Sopher, IBM J. Res. Develop., Vol. 13, May 1969, pp. 226-238	
	CF	"Studies of the SLT Chip Terminal Metallurgy", B.S. Berry, and I. Ames, IBM J. Res. Develop., Vol. 13, May 1969, pp. 286-296	
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